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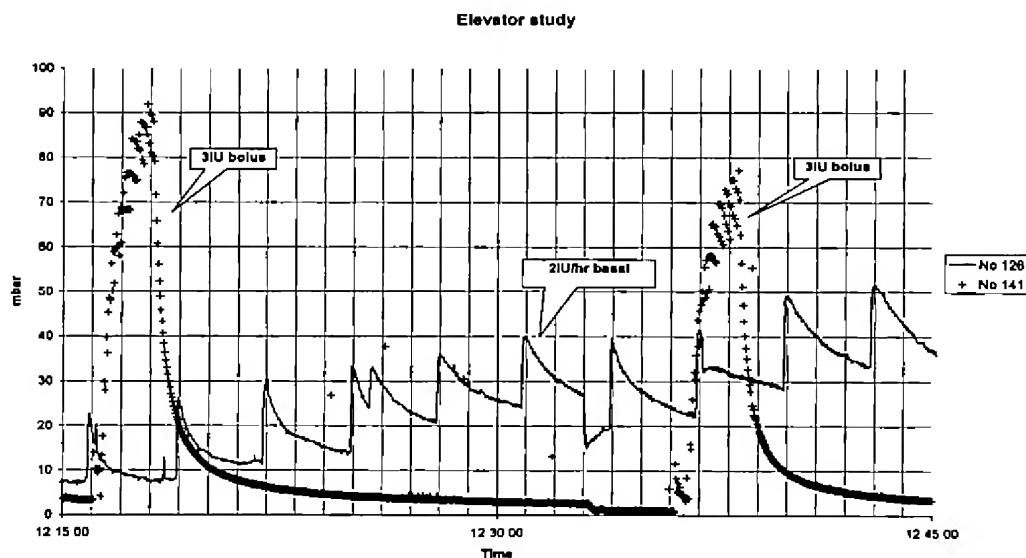
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MEDICAL DEVICE ADAPTED TO DETECT DISENGAGEMENT OF A TRANSCUTANEOUS DEVICE



(57) Abstract: The present invention provides a medical device comprising a transcutaneous device. The medical device further comprises a controller for detecting a first condition representative of the transcutaneous device being arranged in a subcutaneous first position, and for detecting a second condition representative of the transcutaneous device being arranged in a non- subcutaneous second position, wherein the controller is adapted for actuating an alarm when a condition representative of the transcutaneous device being arranged in a non-sub-cutaneous position is detected.

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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2006/062301

A. CLASSIFICATION OF SUBJECT MATTER  
INV. A61M5/168 A61M5/142

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EP0-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/009131 A1 (VAN ANTWERP WILLIAM P ET AL) 9 January 2003 (2003-01-09) paragraph [0076]; figures 2a-3b -----	1-19
A	WO 2005/025652 A (ADVANCED CARDIOVASCULAR SYSTEMS, INC; BEYERLEIN, DAGMAR) 24 March 2005 (2005-03-24) the whole document -----	5-8
A	US 4 877 034 A (ATKINS ET AL) 31 October 1989 (1989-10-31) the whole document -----	1
A	US 4 399 824 A (DAVIDSON ET AL) 23 August 1983 (1983-08-23) the whole document -----	1
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☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier document but published on or after the international filing date  
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
"O" document referring to an oral disclosure, use, exhibition or other means  
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  
"&" document member of the same patent family

Date of the actual completion of the international search

19 October 2006

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02/11/2006

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## INTERNATIONAL SEARCH REPORT

International application No  
PCT/EP2006/062301

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2005/039673 A (NOVO NORDISK A/S; NIELSEN, OLE, CHRISTIAN; RADMER, JIM; PREUTHUN, JAN,) 6 May 2005 (2005-05-06) the whole document -----	1-19, 31-34
E	WO 2006/067217 A (NOVO NORDISK A/S; WILLERUP, THERESA, RHOADES; KLITGAARD, PETER, CHRIST) 29 June 2006 (2006-06-29) the whole document -----	1-19, 31-34
Y	US 6 485 461 B1 (MASON DUANE R ET AL) 26 November 2002 (2002-11-26) column 4, lines 18-21 -----	31-34
Y	CA 2 239 457 A1 (VELOCE, FRANK) 3 December 1999 (1999-12-03) the whole document -----	31-34
A	WO 02/40083 A (INSULET CORPORATION) 23 May 2002 (2002-05-23) paragraph [0084]; figures 9-12 -----	31-34

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

Continuation of Box II.1

Claims Nos.: 20-27

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy and surgery. Arranging a transutaneous device subcutaneously in a subject is a surgical step; expelling fluid drug is clearly a therapeutical step. A computer-implemented surgical or therapeutical method is also considered to fall under the exclusion of Rule 39.1 (iv) PCT.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/EP2006/062301

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 20-27  
because they relate to subject matter not required to be searched by this Authority, namely:  
see FURTHER INFORMATION sheet PCT/ISA/210
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:  
1-19, 31-34
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-19

A drug delivery device with a reservoir, an expelling assembly and a controller for detecting two conditions of a transcutaneous device.

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2. claims: 28-30

A medical device comprising a transcutaneous device and a controller for detecting two conditions of the transcutaneous device.

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3. claims: 31-34

A medical device with a mounting surface for application towards a skin of a subject and a transcutaneous device with a visual marking on its distal portion.

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4. claims: 35-41

A medical device with a mounting surface for application towards a skin of a subject, a first and a second electrode.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/062301

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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